

ABSTRACT

A device for the analysis of an optical wavefront includes an array (ML) of microlenses ( $L_i$ ), and signal processing elements. Each microlens ( $L_i$ ) defines a subaperture ( $Sp_i$ ), and focuses an elementary surface of the wavefront, intercepted by the subaperture, for forming a spot ( $T_i$ ) on the detector. For each subaperture ( $Sp_i$ ), a zone ( $Z_i$ ) of assumed localization of the spot is defined. The processing unit makes it possible to establish a measurement file associating to each subaperture the position of this spot. The structure of the array (ML) presents one or several local variations. By comparing the contribution of these local variations taken from the measurement file, with their contribution taken from a reference file, the displacement between the subaperture from which a detected spot is derived and the subaperture that defines the zone of assumed localization wherein the spot is located is measured.